

2020 Northern California Earthquake Hazards Workshop
January 28-29, 2020
USGS, Menlo Park, California

AGENDA

Tuesday, January 28

9:00-9:15 a.m. Welcoming Remarks

Steve Hickman, Earthquake Science Center Director (USGS)
Keith Knudsen, Northern California Earthquake Hazards Coordinator (USGS)
Sarah Minson, Workshop Overview (USGS)

9:15-10:30 a.m. The 1989 Loma Prieta earthquake: 30th-ish anniversary

Steve Hickman (USGS) *Advances in Earthquake Science, Monitoring & Hazard Assessments Since Loma Prieta* [20 min]
Chris Poland (Consulting Engineer) *Technical Advances and Remaining Challenges Since Loma Prieta* [40 min]
Discussion: 15 min
Moderator: **Carol Prentice** (USGS)

10:30-10:45 a.m. Break

10:45 a.m.-12:00 p.m. Fault complexity: lessons from Ridgecrest

Ken Hudnut (USGS) *Cross-Fault Interaction in the July 2019 Ridgecrest Earthquake Sequence, Southern California: What did we see in the field, from imagery & GPS data prior to the M7.1?* [20 min]
Julian Lozos (CSU Northridge) *Dynamic Rupture Simulations of the July 2019 Ridgecrest Earthquakes and Implications for Other Cross Faults* [20 min]
David Schwartz (Scientist Emeritus, USGS) *Conjugate Faulting: Potential Occurrence and Implications for the Bay Area and Northern California* [20 min]
Discussion: 15 min
Moderator: **Tim Dawson** (CGS)

12:00-1:15 p.m. Lunch + Poster Session

1:15 p.m.-2:15 p.m. Lightning Talks: Everything You Want to Know About Current Earthquake Research in Northern California in Less than an Hour! *Andy Barbour (USGS), Phil Beilin (CA State Guard), Yehuda Ben-Zion (USC), Rufus Catchings (USGS), Noha Farghal (USGS), Chris Goldfinger (OSU), Ruth Harris (USGS), Alex Hatem (USGS), Ken Hudnut (USGS), Diane Moore (USGS), Carol Ostergren (USGS), Jessie Pearl (USGS), Belle Philiposian (USGS), Arben Pitarka (LLNL), Artie Rodgers (LLNL), Valerie Sahakian (UOregon), Maureen Walton (USGS)*
Moderator: **Sarah Minson** (USGS) [1 slide and 3 min per speaker]

2:15-3:15 p.m. Posters

3:15-4:30 p.m. ShakeAlert earthquake early warning roll-out

Jessie Saunders (USGS) *Examining regional EEW alerting strategies through the lens of the Ridgecrest earthquakes* [20 min]
Sara McBride (USGS) *Failure to alert? Exploring perceptions of ShakeAlert during the 2019 Ridgecrest Earthquake Sequence* [20 min]
Jill Barnes (LAUSD) *ShakeAlert and Disaster Readiness in LAUSD* [20 min]
Discussion: 15 min
Moderator: **Jen Andrews** (Caltech)

4:30 p.m. Adjourn day 1

Welcome to the U.S. Geological Survey.

We serve the Nation by providing reliable scientific information. The USGS strives to provide a diverse, inclusive, and respectful environment because it is essential to the integrity of our organization and our science. If anything fails to exemplify these ideals, please alert an organizer for immediate assistance.

Wednesday, January 29

9:00-10:15 a.m. Liquefaction

Laurie Baise (Tufts) *A Geospatial Approach to Mapping Liquefaction after Earthquakes* [20 min]

Renmin Pretell (UCD) *Numerical modeling of ground deformations at Balboa Blvd. in the 1994 Northridge Earthquake* [20 min]

Scott Brandenburg (UCLA) *Seismic Risk to the Sacramento – San Joaquin Delta Levee System* [20 min]

Discussion: 15 min

Moderator: **Alex Grant** (USGS)

10:15-10:25 a.m. Break

10:25-11:25 a.m. Celebrating the life and career of Paul Spudich

Ralph Archuleta (UC Santa Barbara) [20 min]

Norm Abrahamson (UC Berkeley) [10 min]

Joe Fletcher (USGS) [10 min]

Marcia McNutt (National Academy of Sciences) [10 min]

Remembrances: 10 min

Moderator: **Tom Hanks** (USGS)

11:25-1:00 p.m. Lunch + Poster Session

Uncertainty in hazard and risk assessments: Guiding research directions

1:00-1:10 p.m. Keith Knudsen (USGS) *Introduction* [10 min]

1:10-2:05 p.m. What we don't know about seismic sources

Judy Zachariasen (CGS) *Locations and activities - research suggestions to improve the Quaternary fault and fold database in California?* [15 min]

Tim Dawson (CGS) *Uncertainties in geologic data used in UCERF* [15 min]

Chris Madugo (PGE) *Faulting at Gas Transmission Lines: Ongoing Activities and Research Priorities to Characterize Displacement Hazard and Manage Risk in Northern California* [15 min]

Discussion: 10 min

Moderator: **Belle Philibosian** (USGS)

2:05-3:00 p.m. What we don't know about shaking

Patricia Thomas (LCI) *Evaluating Earthquake Hazards in Northern California: What Really Matters and What Doesn't* [15 min]

Evan Hirakawa (USGS) *Multiple scales of uncertainty in the USGS Bay Area Velocity Model* [15 min]

Grace Parker (USGS) *Knowns and unknowns in seismic site response: controls and coupling* [15 min]

Discussion: 10 min

Moderator: **Austin Elliott** (USGS)

3:00-3:10 p.m. Break

3:10-4:05 p.m. What we don't know about risk

Delphine Fitzenz (RMS) *Comparative risk in Northern California using the reference of the earthquake-induced flooding in the Sacramento Delta* [15 min]

Yajie Lee (ImageCat) *The Impact of Hazard Models on Risk Assessments – Unintended Consequences? - Lessons from Real-World Examples* [15 min]

Ned Field (USGS) *Assessing the Value of Removing Earthquake-Hazard-Related Epistemic Uncertainties in California* [15 min]

Discussion: 10 min

Moderator: **Keith Knudsen** (USGS)

4:05 p.m. Concluding Remarks, Keith Knudsen

4:30 p.m. Adjourn